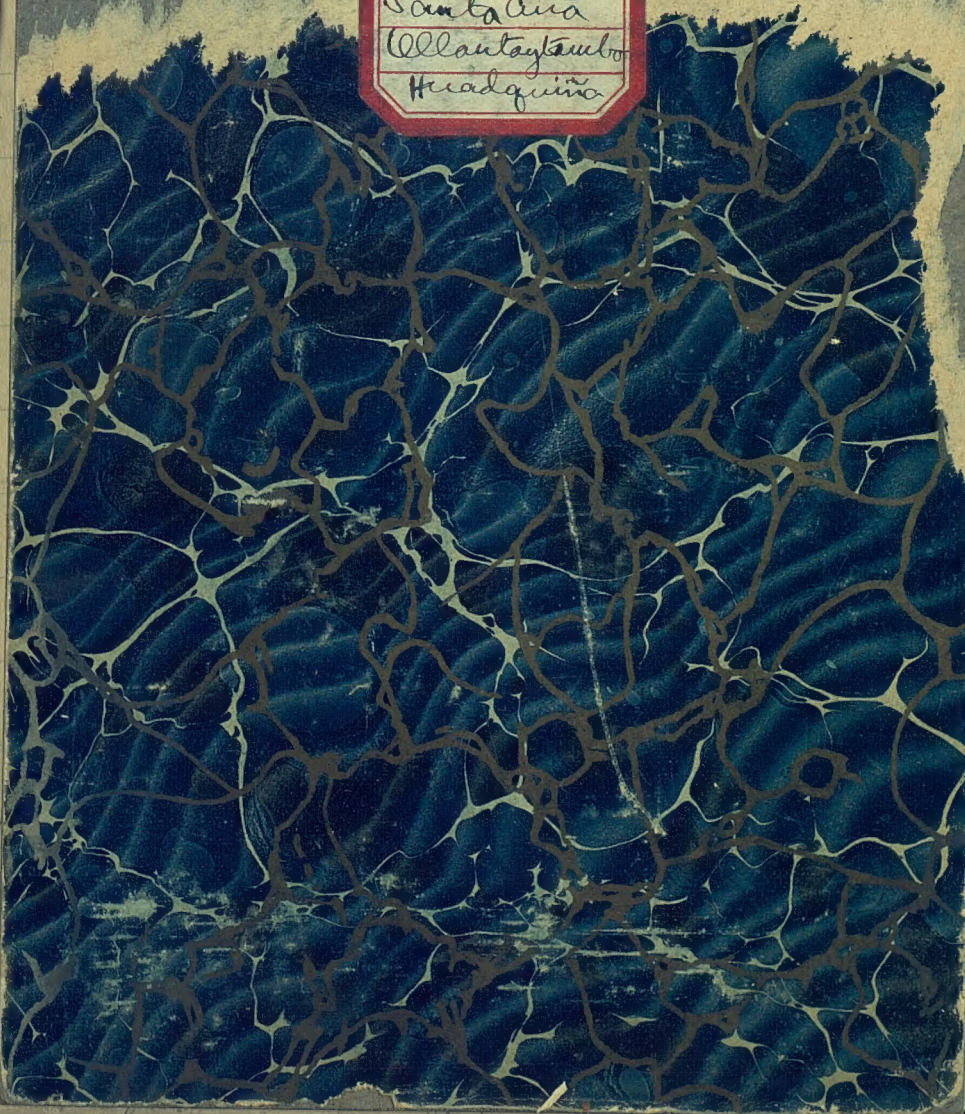
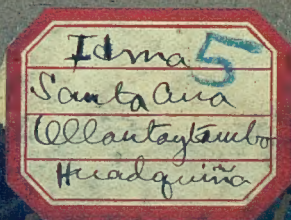


No. 5



Feb 7. Left Puerisida at 10 AM, &
drove through Moreno to Banning
where we arrived at 11 P.M. Considerable
snow on road in the Bad Lands &
through San Geronimo Pass. About the
eastern edge of San Jacinto Mts. noticed
many desert willows in the canons

Feb 8: Rained in AM, so remained in
Hotel in Banning. Set out a few gopher
& mouse traps. Caught 3 gophers &
3 *Peromyscus* sp., & 1 *Perodipus*.

Feb 9: Started at 10 AM. for Whitewater,
where we arrived at 3 PM. Near Banning
saw a *Sper.* *leucurus* which is perhaps
their western limit. at Calezon saw
the first mesquite & creosote bushes, about
Banning *Opuntia* *bernandina* is the
commonest form but does not extend
as far down as Whitewater where the
desert cholla begins. *Vistragos* &
small ~~*Opuntia*~~ ^{*Cercus*} are first met with.

Feb 13: Left Whitewater for Palm Springs.
A light snow-storm prevailed
most of the way. Took up quarters in
a house south of the village

Feb 27: Left Palm Springs for Morongo Pass
In Coachella Desert above the station noticed
considerable bunches of giant grass. Further up
this desert is covered by the large cholla (The key
castro of ranchers) also much *Yucca* ~~*sp.*~~ *sp.* *sp.*
seen over 6 ft. high & few small *Yucca* *sp.*
Opuntia *basilaris* & *O.*
echinocarpa are also common. *Yucca* *sp.*
are common. A few *Yucca* *sp.* *sp.* *sp.*
common in the Big Morongo Canon, also
mangle & further up. lead scrub oaks

Intervales

Reptiles

Not seen. Upper part of Intervales River,

2 *Spermophilus* sp. *fisheri*
a few seen

3 *S. leucurus* abundant
Said to be common

4 *Peromyscus* *tex* -
Two taken. Not common probably
western limit

5 *P. eremicus* - Common

6 *Neotoma* *virgata*
abundant

7 *N. fusc.* *macrodon* -
One taken in species thicket

8 *Thomomys* *subvexus* - Common

9 *Pipodromus* *mer.* *similis* - Abund.

10 *Perognathus* *peir.* *angustirostris* -
Several taken

11 *Lepus* *tex* -
One taken, a few seen

12 *Lepus* *arizonae* -
a few seen

13 *Felis* *p.* *eremicus* -
Said to be common

14 *Canis* *del.* *com.*

15

I General Description of 12
Situation altitude
Topography
Rock formation
Climate
Vegetation {
Life zones

II ~~Life~~ Life history
Range - vertical
horizontal
abundance
Food
Enemies
Notes
Hou
Hab

- (13) ^{The} day ^{was} rainy. Caught ^{several} *Mus musculus* in the fields. The *Cihuanaym* traps had only ^a ~~hair~~ in them the animals having escaped. Word came up yesterday to ~~admonish~~ ^{marciano} ~~marciano~~ ^{who is down} ~~who is down~~ ^{with malaria}.
- (14) Went up to the forested gulch where we saw the monkeys but found nothing. Set some traps for *Cihuanaym* in ~~runways~~ ^{edge of the} ~~edge of the~~ ^{green} fields. The natives say they come only to green fields to feed + we looked about the edge of the coca + some fields but could find no runways to disprove their assertion. At dusk ^I went down to the ranch house to shoot bats but none came out of the tiled roofs. They shone in a store room however. While I was there all the *runways* lined up ^{for} ~~for~~ ^{their} ~~names~~ ^{names} were called ^{and} ~~and~~ ^{recorded} in a book + each was given a cup of *aguardiente* which they drank on the spot ~~spot~~ ^{spot} ~~or~~ ^{or} poured into a bottle. This is a daily custom at the finca. Rained during the morning. This ranch is about equally divided between coca + cane-fields. Some *yuca*, corn + coffee ^{are} ~~are~~ ^{raised} ~~raised~~ ^{for} ~~for~~ ^{home} ~~home~~ ^{consumption}. This place seems to be as long ^{in the} ~~in the~~ ^{Amazon} ~~Amazon ^{valley} as the Incas lived + it ^{still} ~~still~~ ^{marks} ~~marks~~ ^{the} ~~the ^{lower} ~~lower ^{the} ~~the ^{present} ~~present ^{civilization} ~~civilization~~ ^{much} ~~much~~ ^{lower} ~~lower~~ ^{in the} ~~in the~~ ^{Amazon} ~~Amazon ^{Valley} than in ancient times. The present population is parasitic on the fields + waterways of the ancient *Peruvians*.~~~~~~~~~~~~

- (15) Went up to the coca fields where we saw the monkeys + caught set *Cihuanaym* traps. Caught a ^{very} ~~very~~ ^{young} ~~young mouse in one trap + a brown *Phyllotis* mouse in the other. Shot several birds all I encountered: the black + white *Antbird*, a ^{very} ~~very~~ ^{young} ~~young *Schizoceryle*, melathic ^{Calliste} ~~Calliste~~ ^{all} ~~all~~ ^{birds} ~~birds ^{common} ~~common at San Miguel Bridge. Saw several other species common there. This place has same ^{the} ~~the ^{elevation} ~~elevation + climate as San Miguel Bridge + ^{the} ~~the ^{same} ~~same ^{birds} ~~birds + mammals ^{found} ~~found~~ ^{at} ~~at ^{San Miguel} ~~San Miguel ^{Bridge} ~~Bridge ^{but} ~~but ^{has} ~~has ^{an} ~~an ^{infusion} ~~infusion ^{of} ~~of ^{lower} ~~lower ^{Amazon} ~~Amazon ^{species} ~~species~~ ^{such} ~~such ^{as} ~~as~~ ^{monkeys} ~~monkeys ^{maguadeer} ~~maguadeer ^{etc.} ~~etc.~~ ^{collected} ~~collected ² ~~2 ^{species} ~~species ^{of} ~~of ^{bats} ~~bats ^{at} ~~at ^{the} ~~the ^{ranch} ~~ranch~~ ^{house} ~~house. No *Hesperomys*, blood sucking bats occur here to molest ^{the} ~~the ^{monkeys} ~~monkeys + stock generally. ^{The} ~~The ^{day} ~~day ^{was} ~~was ^{rainy} ~~rainy. At dusk ^I hunted *Cihuanaym* in ^{the} ~~the ^{usual} ~~usual ^{range} ~~range~~ + fired but did not kill it. We saw one other along way off.~~
- (16) Went up early to the *usual* but saw no *Cihuanaym*. Jose brought in 5 ^{very} ~~very~~ ^{young} ~~young *Cihuanaym* from the ^{of} ~~of ^{coca} ~~coca ^{field} ~~field. Monkey gulch + a sad tale of 2 traps sprung + only hair in them. Caught 5 ^{very} ~~very ^{young} ~~young *Cihuanaym* all have shorter tails than those of *Tomomay*. Went to the *usual* at 4 P. M. + ^{waited} ~~waited~~ ^{until} ~~until ^{dusk} ~~dusk~~ ^{but} ~~but ^{saw} ~~saw ^{one} ~~one ^{*Cihuanaym*} ~~*Cihuanaym*.~~~~~~~~~~~~~~~~~~~~~~

Saw several of the large *Phyllostomus* bats ~~in the major~~ ^{in the major} ~~but~~ ^{but} ~~could not~~ ^{could not} shoot any ~~owing to the darkness~~ ^{owing to the darkness}

(26) Left at 10 A.M. with ^{the} pack outfit for Santa Rosa where we arrived at ^{5 P.M.} dark in a rain storm. Went out with ^{the} manager for ^{the} ~~cihuayras~~ ^{cihuayras} but saw none ⁱⁿ ~~the~~ ^{the} ~~gravel~~ ^{gravel}. The ranch is planted solely to coca with some ^{the} ~~grain~~ ^{grain} for home use. Our way up ^{the} ~~road~~ ^{road} was bordered by ^{the} ~~white~~ ^{white} blossoms. A tall ^{the} ~~cerus~~ ^{cerus} ~~cactus~~ ^{cactus} was also common. ^{the} ~~Algodobos~~ ^{Algodobos} ~~tree~~ ^{tree} was ~~seen~~ ^{seen} at Santa Rosa. Many Palo Santo grew on the gravelly bars & creek margins ^{there}.

(27) Heavy thunder shower during the night ^{and} ~~much~~ ^{much} rain fell. Left at 8 A.M. & went to ^{the} ~~Headguina~~ ^{Headguina} where we arrived at 1 P.M. This ranch is devoted to ~~coca~~ ^{coca} ~~only~~ ^{only}, ^{no} ~~no~~ ^{no} coca being ^{the} ~~the~~ ^{the} ~~grown~~ ^{grown} here. Saw Palo Santo & white ^{the} ~~the~~ ^{the} ~~flowered~~ ^{flowered} acacias ^{the} ~~the~~ ^{the} ~~along~~ ^{along} ^{the} ~~the~~ ^{the} ~~way~~ ^{way} up to ^{the} ~~the~~ ^{the} ~~point~~ ^{point} but they do not occur further in the ^{the} ~~the~~ ^{the} ~~canyon~~ ^{canyon}. Hill ^{the} ~~the~~ ^{the} ~~sides~~ ^{sides} ^{the} ~~the~~ ^{the} ~~of~~ ^{of} ^{the} ~~the~~ ^{the} ~~river~~ ^{river} were slate & shale up to this point ^{the} ~~the~~ ^{the} ~~granite~~ ^{granite}.

(28) No rain during the night. Caught 4 ^{the} ~~the~~ ^{the} ~~black~~ ^{black} ^{the} ~~the~~ ^{the} ~~snakes~~ ^{snakes} & one brown ^{the} ~~the~~ ^{the} ~~snake~~ ^{snake} in the cane fields. Went ^{the} ~~the~~ ^{the} ~~up~~ ^{up} ^{the} ~~the~~ ^{the} ~~road~~ ^{road} following ^{the} ~~the~~ ^{the} ~~Headguina~~ ^{Headguina} creek for a league

to yuca fields where I saw one cihuayra. Saw very few birds & no new ones at all. Shot a Blue & vinaceous pigeon like ones seen at Idusa. Several small fields of coca occur here ^{the} ~~the~~ ^{the} ~~for~~ ^{for} ^{the} ~~the~~ ^{the} ~~yuca~~ ^{yuca} ^{the} ~~the~~ ^{the} ~~only~~ ^{only}. Many aguacate or palto trees were seen ^{the} ~~the~~ ^{the} ~~in~~ ⁱⁿ ^{the} ~~the~~ ^{the} ~~the~~ ^{the} ~~fields~~ ^{fields} ^{where} ~~there~~ ^{there} ~~were~~ ^{were} ^{also} ^{also} ^{the} ~~the~~ ^{the} ~~coffee~~ ^{coffee}, yuca & ^{the} ~~the~~ ^{the} ~~pacay~~ ^{pacay} ^{the} ~~the~~ ^{the} ~~trees~~ ^{trees} ^{growing} ^{growing}. Headguina is the upper limit of cihuayras, yuca, coca & cane in the ^{the} ~~the~~ ^{the} ~~Purumbamba~~ ^{Purumbamba} valley.

Mammals. Head quinger.

- 1 Akodon - Abundant everywhere.
- 2 Phyllotis brown. A few taken
- 3 Cilioryzomys - One said In yuca. Said to be common.
- 4 Felis ocelus (Chinchay used her name)
One skin seen.
- 5 Felis ~~gymnid~~? ~~Satr~~ montes - Said to
uniform in color. Not seen.
- 6 Uta - a uate - Said to occur in fields with
citruagum ~~said~~ among other things ~~bananas~~.
Grisonia
- 7 Adcoilers - Found on mts at 8000 to 12000 ft.
- 8 Tremarctos
- 9 Mustela - Weasels said to occur.
- 10 Lemmings - Commonly attack mules & cattle

- Birds of Huadquina
- 1 Torrent Duck. - Several seen on creek
 - 2 Ani - common in cane - fields.
 - 3 White tailed Dove - common.
 - 4 Blue + Vinaceous Pigeon - One shot, another seen.
 - 5 Black Phoebe - common on creek
 - 6 Gray Kingbird - Abundant
 - 7 White-crowned Flycatcher - common.
 - 8 Song-tailed Flycatcher - "
 - 9 Rufous Trogon - Seen once.
 - 10 White bellied Hummer - a few seen.
 - 11 Crested Sparrow, common.
 - 12 Black Vulture "
 - 13 Red winged Black - One seen, med. size
 - 14 White Bellied Violet Swallow - Abundant
 - 15 Black-headed Red Start Warbler "
 - 16 Black-capped Orange "
 - 17 Black ant Bird Several seen.

Vegetation Olangetambo

Cereus cactus - giant on sides of valley; in
bloom in Oct, flowers white -

Cholla cactus - like but less abundant higher up.

Willows -

Alder

Standsberry

Encallonia

Mistura

Gray Saponaria

Rock -

Splintered shales - yellow

Soil black

Granite - across river

Birds - Formalin + alc			Est.
591	Yellow Warbler	Idena 900 ft.	10
592	Trail Flycatcher	" "	"
593	Spotted Tree Creeper	" "	"
594	Indigo Honey	" "	"
595	Little Broad Bill	" 6,000	12
603	White Bellied Vireo	" "	15
604	Gray Kingbird	" "	"
605	Light Blue Tanager	" "	"
606	White crested Flycatcher	" "	"
607	White Bellied Vireo	" "	"
611	Vermillion crowned Flycatcher	" "	17
642	Yellow Broadbilled Warbler	" "	22
643	" "	" "	"
644	Cotton top Flycatcher	" "	"
645	House Wren	" "	"
657	Perfor. Wg Wren-Tit	Santa Ana 3,000	25
668	Blue Grosbeak	Tombury 8,000 Nov. 2	

collected

Birds of Rio Cosireni + Combrevis

- Tinamou (Large Slaty) Mach. Chin-chu-re
Many seen solitary in forest near Uvini + a few at S. Hernandez. Often seen running in road 100 yds. away. Note a clear whistle.
- Tinamou (Perfor. headed) Mach. Yum-got-re-ny
Seen in same country as last except S. Hernandez. Solitary. Note same apparently.
- Tinamou - (Small purplish)
Found in same country as last solitary also. One caught in steel trap set on Uvini trail.
- Cormorant -
A large sized one, size of goose, seen in Combrevis River only.
- Sun Bittern - Mach. Chi-vi-nu
Seen solitary on gravel beaches of Combrevis. One shot by laborer at Uvini.
- Spotted sandpiper -
One shot on Combrevis where others were seen.
- Pauhil Mach. Pau-heel Cha-mu-ny-mi
Seen in Combrevis forests where 5 were shot. Usually paired + when flushed take to trees. Often lured by machizangas.
- White-crested Pava Mach. Ky-u-re Pipi-ka
Very common in Combrevis forests where many were shot. Habits like last.
- Brown streaked Pava Mach. San-ga-ti P...
Seen about Uvini, Combrevis + S. Hernandez. Note a deep growl like that of monkey. Usually seen solitary.
- Black Pava Mach. Com-bru-in-ri Al...
Seen near Uvini + several times at S. Hernandez. Habits like pauhil.
- Chitchara Parula Mach. Ka-te...
Found at Uvini camp where seen several times. Very noisy + travel thru forest in small parties. One shot.

- 12 Golden-crested Quail - One shot at Uvini - Small coveys often flushed in forest. Mach. Pa-mor-ro
- 13 Trumpeter - One seen domesticated at Uvini, not seen in forest.
- 14 Spotted Night Heron - One seen at Uvini - another above S. Hernandez.
- 15 Condor - Two seen one day above Pachinal at Uvini but they are very rare this low
- 16 Black Vulture Abundant at Uvini, Combrecito + S. Hernandez about dwellings everywhere
- 17 Slaty Kite Several seen + 2 shot but lost from decay. Mach. Pa-chi-a
- 18 Small Butler - Two shot on Combrecito, not seen elsewhere ^{Mach. Cho-tar-ni}
- 19 Sparrow Hawk - a pair seen at S. Hernandez.
- 20 Black-brown Gallinule. - One caught in other trap on Combrecito, not seen elsewhere
- 21 Purple Wood Pigeon - Common in Forest in pairs or small flocks. Note very striking + imitated by Machigangas often. Mach. Sam-bachi
- 22 Pink Wood Dove - Several seen in forest at Uvini
- 23 White-bellied Savender Dove - One shot at Uvini - Others seen.
- 24 Quail Dove - Two shot at S. Hernandez + caught there in steel trap.
- 25 Yellow-tailed Talking Parrot One shot on Combrecito. Many seen in huts at Uvini bought of Machigangas. Mach. Sim-tar-ro
- 26 Blue-headed Parakeet Many seen about Machiganga houses.

- 27 Crimson-tailed Parakeet. Seen in flocks also domesticated by Machigangas. ^{Mach. Mi-mir-ni}
- 28 Yellow-winged Green Parrot. One shot at Uvini. Seen in flocks often. ^{Mach. Par-ret-to}
- 29 Green Macaw - Often seen in pairs at Uvini. One shot but lost by decay.
- 30 Sharp-tailed White-eyed Parrot. Seen on Combrecito at Machiganga Village.
- 31 Little Green Parakeet. Many seen about Machiganga huts.
- 32 Large Green Vireo - Not. One shot above S. Hernandez. Not seen elsewhere
- 33 Blue Kingfisher - One seen at Uvini + another on Combrecito.
- 34 Rufous Scaled Owl - One shot at Uvini, no others seen.
- 35 Large Boat-tailed. Abundant at Uvini in open fields where they called at dusk every day. ^{Mach. Pi-ni}
- 36 Small blackish Boat Sucker - One shot above Uvini at Pachinal where others were seen
- 37 Brown Swift. Often seen in flocks at Uvini also on Combrecito.
- 38 Blue-headed Trogon. ^{Mach. Chon-gon-ni} Several shot at Uvini
- 39 Rufous long-tailed " Seen at Uvini + on Combrecito. Common. Mach. Chi-gir-ni
- 40 Small Olive Trogon - One shot at Uvini
- 41 Barred-tailed " Several seen at "
- 42 Yellow Puff Bird - a pair seen
- 43 Streaked " One shot on Combrecito
- 44 No others seen.
- 45 Red Banded Toucan. Common at Uvini. Mach. Ni Pe-sek-ta
- 46 Large white-throated Toucan - Seen often at Uvini + Combrecito
- 47 Short-billed Toucan - One seen + shot on Combrecito

- 48 Boy-cork - Common at Uvini + Combreco ^{mach: Kum-hye-ni}
- 49 Small Red Woodpecker - One shot at Uvini, ^{also} seen also at S. Hernandez
- 50 Red-capped Woodpecker - Shot on Combreco
- 51 Large May Tyrant Flycatcher - Seen at Uvini S. Hernandez + Combreco
- 52 Pigmy gray Flycatcher - Seen at Combreco
- 53 Small Hoopoe Flycatcher - " at S. Hernandez
- 54 Black Woodpecker - One seen domesticated at S. Hernandez, not seen in forest.
- 55 Cock of Rocks - Often seen + heard at Uvini, One shot, note a ground
- 56 Long-tailed Manakin Thrush - Shot at S. Hernandez
- 57 Ruby-throated Hummer - One shot at Uvini
- 58 Emerald Green " " seen on Combreco, Mach: Chum-gir-ni
- 59 Buff-legged Hummer - One shot at S. Hernandez
- 60 Red-billed " " " "
- 61 Long-billed Tree Creeper - Several seen at Uvini + S. Hernandez
- 62 Recurved-billed Tree Creeper - One shot at S. Hernandez, not seen lower down.
- 63 White-headed Angel - One seen at Uvini Bridge but no others
- 64 Brown House Wren - One shot at Uvini where they were common + in song.
- 65 Violet & drab Swallow - Common at Uvini Bridge
- 66 Large White-bellied Vireo - Shot at Uvini + S. Hernandez

- 67 Black-headed Blue Macaw - Common in small flocks on Combreco, seen also near Uvini Mach: Chum-ni
- 68 Lesser Antioch Honey Creeper - One shot at S. Hernandez, no others seen.
- 69 Pine-colored Tanager - Several shot at Uvini + Combreco, seen also at S. Hernandez
- 70 Black streaked yellow Tanager - Shot in forest at Uvini
- 71 Brown Tanager - Shot at Uvini only
- 72 Scarlet " " " " Mach: Chum-ni-ti S. Hernandez only
- 73 Brown + Gold Tanager " " "
- 74 Black Carmine ^{mach: ka-chad-ni} - Many seen at Uvini + everywhere - Trees with nests common.
- 75 Brown Carmine - Less common.
- 76 Golden-capped Tanager - Shot at Uvini
- 77 Pigmy Broad Bill - Shot at Uvini + also on Combreco
- 78 Streaks-breasted Creeper - Shot at Uvini only
- 79 Alouatta Bob-tailed Vireo " " "
- 80 Red-billed ^{dacanga} Trogon - Often seen at Uvini + on Combreco
- 81 Long-tailed Broad Bill - One shot.
- 82 Red-capped Sparrow - Several seen near camp at Uvini
- 83 Long-billed Black & yellow Warbler - Several seen at Uvini
- 84 Short-tailed Green Tanager - Shot at Uvini + also at S. Hernandez
- 85 Slender-billed Brown Tanager - Shot at Uvini
- 86 Yellow Notch - " Tanager - Shot at Uvini
- 87 Umbrella Bird - Shot on Combreco, another seen solitary, not seen elsewhere Mach: Chin-ku-winkto
- 88 Shore Finch - Shot on Combreco banks only

- 89 Fork Flycatcher - One shot on Conchecito but not seen elsewhere.
- 90 Druim-headed Black Tanager. One shot on Conchecito, not seen elsewhere.
- 91 White Spotted Honey Creeper. Several pairs seen in banyans on Conchecito but not elsewhere.
- 92 Plum-Tanager. One shot at S. Fernando, a ♀, the ♂ is light blue. Several other pairs seen there.
- 93 Short-tailed Goldfinch. Seen in flocks at S. Fernando. A goldfinch also seen on Conchecito.
- 94 Wh. Throated Flycatcher. Several seen at S. Fernando.
- 95 White-crested Flycatcher. Several seen at S. Fernando. Two shot.
- 96 Yellow-browed Warbler - Several seen at S. Fernando.
- 97 Blue & Black Metallic Tanager - One shot at S. Fernando.
- 98 Dusky Finch. Several seen at Uvini.
- 99 Olive & Yellow Tanager. One shot at S. Fernando.
- 100 Brown bearded Hummer. Seen at Uvini also at Lucma + at Paso.

Idina - Geology

Slopes of hills about valley without rock formation, composed of bright red soil overlain by a black vegetable mould. Rocks along creek all granite boulders. Cultivated area of valley & hillsides cleared forest land. Hillsides to top of mountains from Idina down to Umbambu burned off forest which was support a coarse grass & brush (chiefly a disk flowered composite). Originally this whole valley & the Umbambu state junction was covered by a heavy mountain forest.

Rain daily but only short quiet showers. Few over biting insects in forest or elsewhere. Ants not very troublesome.

Reptiles

- Snake none seen
- 1 - Lizard green headed rock lizard. Seen on rock fence & caught in rat traps.
- 2 - Oenictophorus - large whip-tailed lizard common on road below Idina.

Trees - Iduma

- 1 Cecropia - common forest tree.
 - 2 Ficus - a few large ones seen on road to Tucuma.
 - 3 Palo Santo - common near stream in flower.
 - 4 Stump bilobed palm. - "Hendushub" in forest.
 - 5 Bamboo - grass - abundant in forest & stream banks.
 - 6 Slender stemmed Pinnate palm. Seen at crest of valley on Tucuma road at about 1,000 ft. altitude.
 - 7 - Flat top Pinnate Palm - a few in forest, also some at Hacienda.
- No prickly leaved stemmed palms seen in forest or near along Raphia like leaves, all of which were characteristic of Coserini Forest.

Mammals of Iduma

- 1 Ateles - Black & white monkey said to occur.
- 2 Chrysotrix - Encountered a herd of small yellow monkeys in forest which may have been this species as they were of about their size & uttered similar notes. Shot at three but failed to kill them.
- 3 Mides - Tame one seen by Gibbet at S. de Ana.
- 4 Dicotyles - Said to occur in forest near camp.
- 5 Grison - Ocate - Said to occur in fields of finca.
- 6 Mazama - Said to occur on edge of fields.
- 7 Conepatus - " " " "
- 8 Mustela - One caught on cituayun running at edge of yuca field.
- 9 Tremarctos - Said to occur higher up. None shot this year. In the low country near Rosalia they are said to be red in color, no black ones occurring.
- 10 Didelphis - A black skin fresh brought to camp by an Indian.
- 11 Dasypoda - Cituayun occur in all the yuca fields. These they enter at dusk or 4- to 6 P.M. But there are only 1 or 2 in field & they are very wary. Saw 8 but killed none. Traps set on runways were not sprung except in one case where a toe was left in a trap.
- 12 Akodon - A short tailed olive race was found everywhere.
- 13 Phyllotis - A long tailed light brown one caught in fields.
- 14 Mus musculus - Common in houses.
- 15 Arctomys - Shot inside room at finca.
- 16 Akodon - " " "

Birds at Idreca.

Bird Fauna much like that of Umbaua at Matchu Picchu with the addition of some Amazon valley species.

- 1 Turquoise - One seen near summit of Izcuna road but species not determined. None heard whistling in forest.
- 2 - Black Vulture - common about houses.
- 3 - Sparrow Hawk - Seen several times at ranch.
- 4 Torrent Duck - a pair seen in the stream.
- 5 Square-tailed Dove - common about fields. coll.
- 6 Blue & Vinaceous Pigeon - a few seen in trees. coll.
- 7 Pigeon Dove - Two shot. Not common.
- 8 Chachalaca Valisula - Several flocks of 4-6 seen. coll.
- 9 Large Green Heron - a few seen. coll.
- 10 " Rocket-tailed " " " " but not collected
- 11 Little White-bellied " Common on pinyon trees
- 12 Dull Green " a few seen.
- 13 Kingbird - Abundant. One shot, others seen.
- 14 Long-billed Kingbird. One shot, others seen.
- 15 Long-crested Flycatcher - Seen at 10,000 ft. one shot.
- 16 Vermillion-crowned Kingbird. Common, several shot.
- 17 Yellow " One seen, 4 shot.
- 18 Colton top Flycatcher. Common, collected.
- 19 Traill's Flycatcher - Seen at 10,000 ft.; shot.
- 20 Rufous-breasted " " " "
- 21 Pigeon Emerald Heron - a few seen.
- 22 Black-throated Broad-billed Warbler. One shot at 9,000 ft.
- 23 Blue-capped Yellow Warbler - One shot in forest.
- 24 Black-masked " " - Seen in cane fields
- 25 Yellow Warbler - Seen at 10,000 ft. coll.
- 26 Olive Flycatching Warbler - One shot.
- 27 & 28 Crimson-headed Black Tanager - Common 3 ♂ 1 ♀
- 28 " Black with white lined wings " " "
- 29 Black-headed Slaty Tanager. Several seen & shot.
- 30 Azure Blue Tanager - Common
- 31 Golden-throated Metallic Tanager - a few seen.
- 32 White-throated Snowbird Tanager - One shot, others seen.
- 33 Black-headed Finch - a few seen in cane fields.
- 34 Lushy Finch " " " "
- 35 Yellow-winged Seedeater " One shot " " "
- 36 Crested Sparrow - Common in brushy fields
- 37 Black-headed Goldfinch " " " "
- 38 White-bellied Vireo - Abundant
- 39 Rufous-winged Wren-Tit - "
- 40 House Wren - Common
- 41 Song-tailed Pro-Bill - abundant.
- 42 Spotted Tree Creeper - Seen at 9,000 ft.
- 43 Black & Buff Honey Creeper - a few seen.
- 44 Indigo " " - Seen at 9,000 ft.
- 45 Black-headed Red Start - Abundant
- 46 Quail Dove - a few seen in forest.
- 47 Olive Cuckoo - a few seen - coll.
- 48 Black Robin - Seen at 10,000 ft.
- 49 Brown " " " "
- 50 White-headed Vireo - Seen once on creek.
- 51 White-bellied Blue Shallow - common at finca
- 52 Lushy Swallow - a few seen.
- 53 Green parrot - Common
- 54 Ani - abundant in fields
- 55 Tongue-cake of Rocks - a few seen in forest.

Mamm. S. Area.

- 1 - Akodon short-tailed - Abundant in cane fields
- 2 - Mus musculus - house
- 3 - Tree Bat - One taken in house by C. Leque.
- 4 - Molossus - Very abundant in roof tiles when many were caught in net.
- 5 - Myotis (dark) - Several taken in roof tiles with associated with Molossus
- 6 - Didelphis - One black one taken in sugar mill.
- 7 - Cane rat (short tailed) Said to occur in fields but none seen.
- 8 - Dasypus - The chiguayin said to occur in the yuca fields but rare.
- 9 - Oryzomys - brown tared, One caught in cane field
- 10 - Vampyrops - Several seen in sugar mill
- 11 - Mazama - Said to occur on edge of fields,
- 12 - Felis ocelot - One caught by Indians.
- 13 - Grisonia - Ocelot - Said to occur
- 14 - Felis onca - Jaguar occasionally kills cattle.

Birds -

115 years ago Carlos Leque said Parulids, Picos & perdis were common in fields & S. Area but have been shot by Indians & are now found only many miles lower down Valley.

Birds of S. Area.

- 1 - Turkey Vulture - Many seen, upper limit in valley.
- 2 - Black Vulture - Very common.
- 3 - Bulwer - Small brown One seen
- 4 - Small Horned Owl - common in buildings S.E.
- 5 - Cormorant - Several seen in river.
- 6 - Anhinga - Seen with cormorants, same color.
- 7 - Rufous long-tailed Trogon - a few seen.
- 8 - Acia - abundant in fields.
- 9 - Black-headed red finch - common local.
- 10 - Hairy Finch - " " "
- 11 - Crested Sparrow - common in fields. Lower limit doubtless as none seen at river.
- 12 - White bellied Violet Swallow - common in house
- 13 - Dusky Swallow - a few seen.
- 14 - Giant Swift - Seen in flocks
- 15 - Gray Kingbird - Abundant
- 16 - Red & yellow crested Kingbird - a few seen.
- 17 - Small blackish Tanager - Seen in fields
- 18 - Black, white winged Tanager - " " bush
- 19 - White bellied Vireo - Abundant
- 20 - Azurea Tanager - Seen in pairs.
- 21 - Yellow singing " - Seen in a cage only.
- 22 - House Wren - Common.
- 23 - Rufous winged Wren Tit. - Common.
- 24 - Black masked Warbler - Seen in cane.
- 25 - Pygmy dove - abundant.
- 26 - Spine tailed " - in fields.
- 27 - Long tailed Big Bill - abundant.
- 28 - Green Hummer - a few seen
- 29 - White crested Flycatcher - common

- 30 Brown crested Woodpecker. Several seen
in road above S. Area.
31 Black Cassin's - Several seen,
32 Red crested Tanager - common. One
collected.

Bird fauna not distinctive.

Santa Ana is situated in a very
wide part of the San Juan Valley with
a square league or 2 of ~~low~~ level fields.
Found only on mountain tops at 8,000-10,000
ft. sides & floor of valley treeless except
along river sides where are a few algarobos &
acacias, ^{Palo Santo} Scaevola & other trees. Only rock
formation is a slate seen in a few places.

Birds of Allentayambo

- 1 Titmouse (brown streaked) Several seen at Piri, one shot. Others said to occur above All. a few miles
- 2 Condor - Common on mountains bordering the town up the creek
- 3 Sparrow Hawk - many seen.
- 4 Sharpshin " - a few small hawks seen.
- 5 Great Horned Owl - One purchased from a native
- 6 ~~Scrub~~ Night Jay - Seen in road at dusk.
- 7 White Eagle seen by H + M at Pumaramarca.
- 8 Giant Hummer - common, but no brilliant males seen.
- 9 Long tailed Hummer. Several seen, females only in April & May in Pumaramarca many males
- 10 Dull Green Hummer, a few seen above Pumaramarca at 12,000 ft.
- 11 White-tailed Hummer - a few seen.
- 12 Large Green " " "
- 13 Buff Black " - Several shot above Pumaramarca at 12,000 ft. Not seen elsewhere in Peru.
- 14 White Shouldered Wood Pigeon - Common at Piri & Pumaramarca in flocks in large trees.
- 15 Turtle Dove. Many shot at Piri
- 16 Black Tailed Dove - shot above Siguel 2,000 ft.
- 17 Spotted " " shot at Allentayambo at Pumaramarca.
- 18 Crested Sparrow - commonest bird in field & gardens.
- 19 Black throated Grosbeak - Common about gardens & hedges.
- 20 Slaty Finch - Seen high up at 13,000; above Pumaramarca.
- 21 Slate-colored yellow Billed Finch. - Seen on road-side & garden.
- 22 Black-headed Goldfinch. Common in fields
- 23 Olive Goldfinch - Seen in garden.
- 24 House Wren. Common in garden. One nesting in November in rain quag; 3 eggs in nest.
- 25 Gray Kingbird - Several seen in garden.
- 26 White-eyed, slaty Flycatcher - Seen in garden.
- 27 Slaty cat-bird hawk - a few seen.
- 28 Black Robin - Common at Pumaramarca & above in bush & forest.
- 29 Brown Robin. Very abundant in gardens & hedges.
- 30 Indigo Titmouse - Shot above Pumaramarca.
- 31 Black & Chestnut Honey Creeper - One shot at 12,000 ft. at Pumaramarca.

Mammals of Altiplano

- 1 *Lepus* - *Savillei* common.
- 2 *Mustela* - 3 brought to us by natives, said to live about houses & feed on mice.
- 3 *Canis* - *scottii* seen at Punaamarca by Has. several times.
- 4 *Conopator* - *Savillei* common.
- 5 *Odocoileus* - Seen in many places in the vicinity from 8000 feet to 14000 ft. all seem to be forked horned type. A herd of 9 seen by Mr. A. Salgueiro & he others seen were in pairs or single.
- 6 *Mus musculus* Common in houses.
- 7 *Vireoscia* - Abundant in high ranges at 12000 to 15000 feet in rock piles bordering meadows or punpas.
- 8 *Atadon* (yellow) common near head of creek at 13000-14000 feet.
- 9 *Rhipidura* (shut. tailed) common in same locality.
- 10 " long - " A few seen.
- 11 " Red neck " Several caught in same locality.
- 12 *Oryzomys* - " " " "